

Notice of Allowability

Application No.

10/080,064

Examiner

MOHAMMAD Y SIKDER

Applicant(s)

STAKER ET AL.

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to ex. interview on 2/7/03.
2. ☐ The allowed claim(s) is/are 1-17 and 19-29.
3. ☒ The drawings filed on 19 February 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
(a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No. _____.
(b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
(c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>3</u> . |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>2</u> . | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

Art Unit: 2872

EXAMINER'S AMENDMENT

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2 An examiner's amendment to the record appears below. Should the changes
3 and/or additions be unacceptable to applicant, an amendment may be filed as
4 provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST
5 be submitted no later than the payment of the issue fee.

6 Authorization for this examiner's amendment was given in a telephone
7 interview with Mr. Kenneth Allen on 2/7/03.

8 The application has been amended as follows:

- 9 ☒ a) cancel claims 18,
10 ☒ b) amend claim 1 as follows:

11 1. (Amended) A double-gimbaled micromachined mirror structure for
12 parallel-plate electrostatic operation, said mirror structure comprising:
13 a substrate of a micromirror array with embedded electrostatic
14 electrodes;
15 a mirror in said array of said substrate;
16 a gimbal around said mirror; and
17 a plurality of folded longitudinal gimbal hinge structures such that a
18 plurality of torsional hinge elements are disposed in parallel orientation to the axis of
19 rotation of each hinge structure, said folded longitudinal gimbal hinge structures
20 being disposed at four positions on a gimbal ring, a first pair of said folded
21 longitudinal gimbal hinge structures connecting said mirror to said gimbal and a
22 second pair of said folded longitudinal gimbal hinge structures connecting said
23 substrate to said gimbal.

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REASONS FOR ALLOWANCE

27 The following is an Examiner's Statement of Reasons for Allowance:

Art Unit: 2872

28. The claims are allowable over the prior art for at least the reason that the prior
29 art fails to reasonably teach or suggest a plurality of folded longitudinal gimbal hinge
30 structures such that a plurality of torsional hinge elements are disposed in parallel
31 orientation to the axis of rotation of each hinge structure, said folded longitudinal
32 gimbal hinge structures being disposed at four positions on a gimbal ring as set forth
33 in the claimed combination.

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35 Any comments considered necessary by applicant must be submitted no later
36 than the payment of the Issue Fee and, to avoid processing delays, should
37 preferably **accompany** the Issue Fee. Such submissions should be clearly labeled
38 "Comments on Statement of Reasons for Allowance."

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CONTACT INFORMATION

41 Papers related to this application may be submitted to Group 2870 by
42 facsimile transmission. Papers should be faxed to Group 2870 via the PTO Fax
43 center located in the Crystal Plaza 4. Faxing of such papers must conform with the
44 notice published in the official Gazette, 1096 OG 30 (November 15, 1989). The CP-4
45 Fax Center number is (703) 308-7722.

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47 Any inquiry of a general nature or relating to the status of this application
48 should be directed to M. Sikder whose telephone number is (703) 305-5471.

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MOHAMMAD SIKDER
PRIMARY EXAMINER
February 8, 2003